Defense Nuclear Waste Disposal

Proposed Appropriation Language

For nuclear waste disposal activities to carry out the purposes of Public Law 97-425, as amended, including the acquisition of real property or facility construction or expansion, $112,000,000 to remain available until expended. *(Energy and Water Development Appropriations Act, 2000.)*

Defense Nuclear Waste Disposal

Program Mission

The goal of the Defense Nuclear Waste Disposal Program is to dispose of high-level waste generated from atomic energy defense activities. The primary focus of this program is to find a long term geological repository for Defense Nuclear Waste. This effort supports the Yucca Mountain Site Characterization Project and the Waste Acceptance Storage and Transportation (WAST) Project, which are described in detail in the Nuclear Waste Fund Budget Request.

Since passage of the Nuclear Waste Policy Act of 1982, as amended, the Nuclear Waste Fund has incurred costs for activities related to the disposal of high-level waste generated from the atomic energy defense activities of the Department of Energy. At the end of fiscal year 1999, the balance owed by the Federal Government to the Nuclear Waste Fund was $1,500,000,000 (including principal and interest). The Defense Nuclear Waste Disposal appropriation was established to ensure payment of the Federal Government's contribution to the nuclear waste repository program. Through fiscal year 1999, a total of $1,176,830,000 has been appropriated to support nuclear waste repository activities attributable to atomic energy defense activities.

Funding Profile

(dollars in thousands)

	FY 1999 Current Appropriation	FY 2000 Original Appropriation	FY 2000 Adjustments	FY 2000 Current Appropriation	FY 2001 Request
Defense Nuclear Waste Disposal					
Yucca Mountain Site Characterization	189,000	112,000	-426[a]	111,574	112,000

[a] Per P.L. 106-113, a general reduction of .038 percent was applied to the Defense Nuclear Waste Appropriation

Funding by Site

(dollars in thousands)

	FY 1999	FY 2000	FY 2001	$ Change	% Change
Chicago Operations Office					
Argonne National Laboratory	2,478	2,079	1,933	(146)	-7.0%
Oakland Operations Office					
Lawrence Berkeley Laboratory	6,648	9,137	8,680	-457	-5.0%
Lawrence Livermore National Laboratory	21,758	13,963	13,089	-874	-6.3%
Total, Oakland Operations Office	28,406	23,100	21,769	(1,331)	0.0%
Albuquerque Operations Office					
Sandia National Laboratory	13,851	10,988	10,439	-549	-5.0%
Los Alamos National Laboratory	12,486	9,947	9,450	-497	-5.0%
Total, Albuquerque Operations Office	26,337	20,935	19,889	(1,046)	-5.0%
Nevada Operations Office[a]	123,720	58,639	61,882	3,243	5.5%
Nevada Test Site	6,340	5,717	5,500	-217	-3.8%
Total, Nevada Operations Office	130,060	64,356	67,382	3,026	4.7%
Oak Ridge Operations Office					
Oak Ridge National Laboratory	536	374	348	-26	-7.0%
Total, Oak Ridge Operations Office	536	374	348	-26	-7.0%
Richland Operations Office					
Pacific Northwest Laboratory	1,183	730	679	-51	-7.0%
Total, Program	189,000 [b]	111,574 [c]	112,000	426	0.4%

[a] Includes Financial Assistance to the State of Nevada and Affected Units of Local Government and includes funding for contracts administered in Nevada (I.e. Management and Operating Contractor, USGS, National Academy of Science, Universities, etc.)

[b] $535K was rescinded from the FY 1999 Nuclear Waste Disposal Fund per the Emergency Steel Loan Guarantee and Emergency Oil and Gas Guaranteed Loan Act of 1999 (H.R. 1664).

[c] Per P.L. 106-113, a general reduction of .038 percent was applied to the Nuclear Waste Fund ($899K) and the Defense Nuclear Waste Appropriation ($426K).

Site Description

Argonne National Laboratory

In support of Design and Engineering, Argonne National Laboratory conducts waste form testing. The laboratory is also the custodian for new spent fuel approved test material.

Lawrence Berkeley Laboratory

In support of Core Science, Lawrence Berkeley National Laboratory conducts Unsaturated Zone flow and transport modeling, thermal hydrologic modeling activities, geophysics testing, and supports Drift Scale testing. LBNL also performs the seepage tests in the exploratory studies facility alcoves and niches. LBNL supports the abstraction activities needed to conduct the Total System Performance Assessment in support of Site Recommendation and Licensing Application.

Lawrence Livermore National Laboratory

In support of Core Science, Lawrence Livermore National Laboratory conducts experiments and modeling activities needed for the repository design and to predict responses of the engineered and natural barrier systems to the heat generated by radioactive waste. The experiments include the Single Heater and Drift Scale tests in the ESF, the proposed heater tests in the Cross drift, and the Large Block test on the Fran Ridge at the site. In support of Design and Engineering, LLNL conducts testing and modeling of the waste package environment, waste package materials and waste forms. LLNL also supports the abstraction activities needed to conduct Total System Performance Assessment in support of Site Recommendation and Licensing Application.

Sandia National Laboratory

In support of Core Science, Sandia National Laboratories conducts in-situ monitoring in the Exploratory Studies Facility and in the East-West drift, and performance confirmation testing. The laboratory conducts geoengineering and rock mechanics studies, and backfill analyses in support of Design and Engineering. The laboratory also supports Suitability/Licensing and Performance Assessment with performance assessment modeling.

Los Alamos National Laboratory

In support of Core Science, Los Alamos National Laboratory conducts geochemistry, mineralogy, and colloid transport studies. LANL conducts laboratory – and field-scale transport tests, including the Busted Butte Transport Test, and develops radionuclide transport models for the unsaturated and saturated zone groundwaters at the site. LANL corroborates with USGS on isotopic and groundwater chemistry investigations needed for transport models. In support of Operations/Construction, the laboratory coordinates testing at the Yucca Mountain site, including testing in the ESF. LANL also supports the abstraction activities needed to conduct Total System Performance Assessment in support of Site Recommendation and Licensing Application.

Nevada Operations Office

In support of the Yucca Mountain Project and the OCRWM Program Direction, the Nevada Operations Office administers disbursement of External Oversight and PETT funds to affected units of government, and also administers contracts/agreements with the OCRWM Management & Operating (M&O) contractor, support services contracts and all other financial/contract agreements associated directly with Yucca Mountain Site Characterization Office.

Nevada Test Site

In support of Core Science and Operations/ Construction at the Yucca Mountain Site, the Nevada Test Site, through Bechtel Nevada, provides NTS common site support such as: logistics, fire protection, security, emergency medical services, roads/grounds maintenance, environmental operations, vehicle/construction equipment maintenance, facility maintenance, bus transportation, janitorial and refuse services, and power usage.

Oak Ridge National Laboratory

In support of Design and Engineering, the Oak Ridge National laboratory provides support in analyzing commercial reactor criticality data, radiochemical assays and uncanistered fuel design. The laboratory also provides technical support for the disposal criticality topical report, thermal/neutronics model and criticality analysis process report.

Pacific Northwest Laboratory

In support of Design and Engineering, the Pacific Northwest Laboratory provides waste form testing support.